

REMARKS

Claims 1-26 are currently pending.

I. REJECTION OF CLAIMS UNDER 35 U.S.C. § 102

Claims 1-18 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Engdahl et al., U.S. Patent No. 5,493,571 ("Engdahl"). Withdrawal of the rejection is respectfully requested for at least the following reasons.

Engdahl disclose a node circuit 20 operative to couple Manchester encoded data between a transmission medium 11 and an associated electrical device (12-16). See, for example, the Abstract. With reference to FIG. 1, Engdahl discloses an industrial control communication network 10 that includes a medium 11 to which N number of stations 12-16 are connected to send and receive data. The interconnections of network 10 utilize a coaxial cable 11 connected in a bus topology. The illustrated network 10 has several input/output (I/O) interface circuits 15-16 and X number of processors 12-14, which may be programmable controllers, cell controllers or minicomputers.

Engdahl does not teach or suggest time division multiplexed communication between a MAC and a number of physical layer devices along a common bus serving as a direct interface between the **data link layer** and the **physical layer** as recited in claims 1, 7, 13 and 16. See, for example, FIG. 3. As illustrated in Fig 1 below, Engdahl discloses the processors 12-13 or interface circuits 15-16 at each network station are connected to the coaxial cable 11 (medium: yellow) by a node 20 (data link layer: red) having a unique address that is used to identify messages being sent to and from the associated station. See, for example, Fig. 1 and Col. 5, lines 7-25. The node 20 (data link layer: red) connects to the coaxial cable 11 (medium: yellow) via a tap 103 (physical layer: green). See, e.g., Fig. 5A, Col. 13, Ins. 40-41. Each node 20 (data link layer: red) includes a SMAC 100 which enables the stations 12-16 to communicate over the network via the cable 11. See, for example, FIGs. 5A and 5B. Engdahl discloses a SMAC 100 interfaces with the host processor 102 via a conventional host bus 101 (higher layer: white). The

host processor 102 may be a conventional microprocessor system. See, e.g., FIGs. 5A and 5B and Col. 13, lns. 21-25. Thus, communication is by way of MAC frames 21 exchanged between the SMACs 100 of respective devices via the network cable 11. In other words, a processor 12 (including a host processor 102) via a conventional host bus 101 (higher layer: white) passes data via a node 20 (data link layer: red); through a tap 103 (physical layer: green) over a medium 11 (yellow), through another tap 103 (physical layer: green); through another node 20 (data link layer: red); through another conventional host bus 101 (higher layer: white) to a input/output (I/O) interface circuit 15. Further, Engdahl discloses a SMAC 100 connected to a single tap 103 (physical layer: green). See, for example, FIG. 5A.

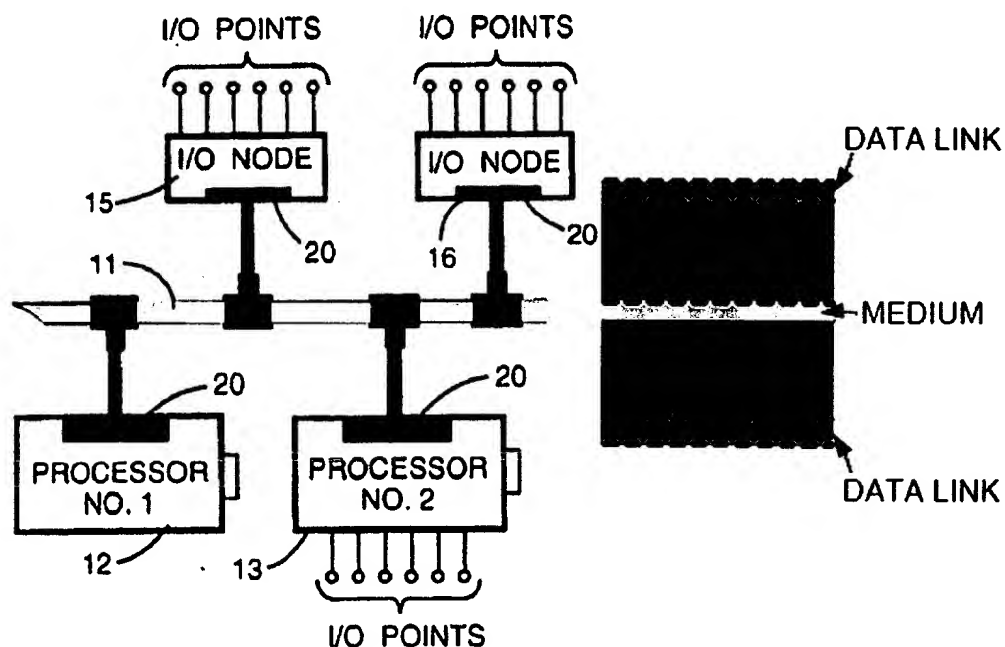


Figure 1: Modified Partial of FIG. 1 of Engdahl

The Examiner contends the I/O devices connected to the I/O node 16 in Fig. 1 are physical layer devices. Further, the Examiner contends the host bus 101 is the common bus serving as a direct interface between the SMAC 100 and the I/O devices. See, page 6, item 3 of the Action. The Applicants respectfully disagree with these additional arguments. Even if the

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I/O devices are physical layer devices as the Examiner suggests, the I/O devices are not connected to a MAC as recited in the present claims. That is, Engdahl does not disclose the I/O devices are connected to the node 16 by a MAC along a common bus. To the contrary, Engdahl discloses direct connections between ports on a controller and each separate I/O device. See, for example, Col. 1, lines 25-26. Further, Engdahl discloses the host bus 101 connects the host processor 102 to the SMAC host interface 143. The SMAC 100 is connected to the network 10 by a tap 103 as described above in Fig. 1. See, for example, Fig. 5A, Col 35, lines 23-27 and Col. 13, lines 40-41.

Therefore, since Engdahl does not teach or suggest one or more of the features as claimed in claims 1, 7, 13 and 16, claims 1, 7, 13 and 16 and the claims that depend therefrom are patentable over Engdahl for at least the reasons stated above.

II. CONCLUSION

In light of the foregoing, it is respectfully submitted that the present application is in condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present invention.

Any fee(s) resulting from this communication is hereby authorized to be charged to our Deposit Account No. 18-0988; Our Order No. E0897 (AMDSP0368US).

Respectfully submitted,
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